BOTANICAL GAZETTE.

VOL. 3 AUGUST, 1878. No. 8

BAPTISIA CALYCOSA, *n. sp.*—Whole plant smooth except that the mucronate leaflets, stipules, bracts and calyx lobes are sparsely ciliate with long white hairs; stem and slender straight branches somewhat glaucous; stipules lanceolate, acute, persistent, 3–7 ribbed, half as long as the short petioled leaves, the sessile leaflets oblanceolate or obovate, obtuse; racemes terminating the branches, long and loose, the long (1–2 inches) and slender pedicels subtended by ovate lanceolate persistent bracts and also bibracteolate above the middle; calyx tube short, about one-fourth the length of the lanceolate spatulate foliaceous lobes, which are but little shorter than the yellow flowers. Legumes and base of stem not seen.

Dry pine barrens, St. Augustine, Florida.

Collected by Miss Mary C. Reynolds who has distributed many of the rare plants of that vicinity. Most nearly allied to *B. Lecontii*, Torr. & Gray, but abundantly distinct from that and other species and remarkable for the ciliate foliage and more especially for the foliaceous calyx lobes.—WM. M. CANBY, *Wilmington, Del.*

A review of the genus being desirable, specimens of all species in flower and fruit will be thankfully received and, if desired, returned. Those from the South and South-West are especially asked for.—W. M. C.

BAPTISIA SULPHUREA, *n. sp.*—Simple with spreading branches, glabrous; leaves on very short petioles, leaflets obovate, somewhat rhombic, obtuse or occasionally emarginate; stipules small, lanceolate, sub-persistent; spikes rather short with deciduous bracts and sulphur yellow spreading flowers; pedicels shorter than the broad campanulate calyx; broad ovate acutish teeth shorter than tube, woolly inside; style much longer than oval ovary (5 lines long); stipe of globose pod exsert.

Prairies, Tabaksi county, collected by Mr. Geo. D. Butler, rare, flowers in May. Indian Territory. *B. leucantha* differs by its larger growth, deciduous stipules, longer spikes of white flowers which open much later, and longer pedicels, short style (3 lines long) about as long as the linear ovary. *B. sphærocarpa* is well distinguished from our new species by its cæspitose growth, more erect branches, strict spikes with erect deep yellow flowers, pedicels shorter than calyx, the lobes of which are triangular lanceolate, very acute, as long as the narrower tube, and sparingly woolly inside; style much longer than the oval ovary (6 lines long); stipe of pod scarcely longer than calyx. The new species being exactly intermediate between the two just mentioned suggests the idea of hybridity.—GEO. ENGELMANN.

A LIST OF SOME OF THE MOST INTERESTING SPECIES OF PLANTS COLLECTED IN THE INDIAN TERRITORY; BY GEO. D. BUTLER.—[When the locality is not mentioned it is Limestone Gap.]

Clematis Pitcheri, T. & G. Thickets.

Anemone Caroliniana, Walt. Common in prairies.

Ranunculus pusillus, Poir. Pools, not uncommon.

Delphinium azureum, Mx. Flowers white with a brown or greenish eye, never blue in this region; leaves thicker, and their divisions narrower than in Iowa specimens. (*D. virescens?* Nutt.). Prairies, common.

Cocculus Carolinus, DC. Common.

Calyocarpum Lyoni, Nutt. Rather rare.

Corydalis aurea, Willd., var. *micrantha*, Engelm. Agrees with the exception that the flowers are large, as in the normal *C. aurea*. Rare, growing in very rich soil.

Corydalis crystallina, Engelm. Prairie knolls, common.

Nasturtium tanacetifolium, H. & A. Thickets and fence rows.

Nasturtium sinuatum, Nutt. Arkansas river, rare.

Erysimum asperum, DC., var. *Arkansanum*, Nutt. Limestone.

Selenia aurea, Nutt. 2–6 inches high; flowers abundant and large for the family. Sulphate flats in early spring, rare.

Draba cuneifolia, Nutt. Limestone.

Cleomella angustifolia, Torr. Roadsides, apparently introduced.

Cleome pungens, Willd. Fort Smith, introduced.

Viola pubescens, Ait., var. *eriocarpa*, Nutt. Alluvial woods.

Arenaria Pitcheri, Nutt. A variable species, usually smooth, with linear, fleshy leaves. Damp soil, common. A very pubescent and glutinous form which grows on dry prairie hills and is a month earlier, I have named var. *pubescens*. Leaves and calyx lobes wider and thinner.

Stellaria Nuttallii, T. & G. Sulphate flats.

Two *Saginæ*: One common in prairies with decumbent stems, and petals spreading horizontally, (*S. decumbens*? Gr.); the other rare, on high timbered ridges, with erect stems and ascending petals, (*S. Linnæi*, Presl.).

Portulaca pilosa, L. Sulphate flats, rare.

Talinum teretifolium, Pursh. Sulphate flats.

Callirrhoe digitata, Gr. Variable. The leaves are sometimes nearly entire; the white to purple flowers ½–2 inches in diameter; petals either entire or cut into a fringe. The large spindle-shaped to napiform roots form the chief subsistence of wild hogs during the spring months.

Callirrhoe pedata, T. & G. A month later, taller, and variable only in the size of the red purple flowers which are ¾ to 2 inches in diameter. Prairies and open woods.

Rhus Toxicodendron, L. Occurs as a vine climbing trees or rocks; as a shrub ½–1 foot high in dry woods; and as a shrub 4–8 feet high along rocky streams.

Rhus aromatica, Ait., var. *trilobata*, Nutt. Heavy scented, odor very disagreeable; flowers and fruit larger than in *R. aromatica*. Limestone cliffs. I believe it is poisonous.

Vitis æstivalis, Mx. The most common variety is the Post Oak Grape, which grows in sandy woods, climbing very little; berry ripe in June, as large as, and more pleasant to the taste than the Northern Fox Grape with which this has sometimes been confounded.

Sapindus marginatus, Willd. Banks of streams, uncommon.

Æsculus arguta, Buckley. May be a variety of *Æ. glabra*, but is pubescent, always shrubby, 2–8 feet high; leaflets 7, scarcely petioled. Openings in woods near banks of streams. Also in Wood county, Texas.

Trifolium reflexum, L. Arkansas river.

Trifolium stoloniferum, Muhl. Alluvial woods.

Hosackia Purshiana, Benth. Sulphate flats and dry woods.

Psoralea esculenta, Pursh. Dry sandy woods, rare.

Petalostemon multiflorus, Nutt. A month later than *P. candidus*. Limestone.

Robinia Pseudacacia, L. Here it is a shrub 4–8 feet high, flowering profusely. Limestone.

Tephrosia onobrychoides, Nutt. Dry prairies.

Indigofera Anil, L. Introduced.

Sesbania macrocarpa; Muhl. Poteau river.

Astragalus caryocarpus, Ker. Limestone.

Astragalus Plattensis, Nutt. Prairies.

Astragalus distortus, T. & G. Dry prairie hills.

Astragalus Nuttallianus, DC. A very small species, the earliest in bloom.

Vicia micrantha, Nutt. Forms a dense pubescent mat in open bare spots, but in thickets it is a delicate little vine, seldom climbing more than a foot.

Lathyrus pusillus, Ell. This is the form which has been named *L. Engelmanni* in Europe. Thickets and damp prairies.

Phaseolus diversifolius, Pers. Dry woods.

Phaseolus pauciflorus, Benth. Dry woods.

Baptisia australis, R. Br. Prairies.

Baptisia leucophea, Nutt. Prairies.

Baptisia leucantha, T. & G. Prairies.

Baptisia sulphurea, Engelm., *n. sp.*, BOT. GAZETTE, *Vol.* III, *p.* 65. Prairies Tabaksi county, rare, flowers in May.

Baptisia sphærocarpa, Nutt. In patches, 1–3 feet high, unchanged in drying. Legume variable in shape, prairies.

Baptisia villosa, Ell., at least as to Nuttall's Arkansas plant, see Torr. & Gr. Fl. 1, p. 384. Stem short, with spreading branches; branches and leaves villous, the younger ones silky; leaves on petioles 3 lines long; leaflets oblanceolate to obovate-oblong, with wedge-shaped, attenuated base, obtuse, the lower ones 2–3 inches long; stipules foliaceous, ¾–1½ inches long and ¼ inch wide, persistent, lanceolate, acute; bracts caducous; flowers yellow, borne in short terminal racemes, on erect pedicels 3–6 lines long; calyx teeth triangular lanceolate, nearly as long as the turbinate tube; ovary hairy; fruit unknown. Near *B. lanceolata*. Prairies, Tabaksi county, rare.

Cassia obtusifolia, L. Fort Smith, introduced.

Schrankia runcinata, Willd. Prairies, common.

Desmanthus brachylobus, Benth. Prairies and woods.

Acacia lutea, Lea. Sulphate flats.

Acacia hirta, Nutt. Limestone.

Prunus Chicasa, Mx. Thickets.

Prunus Chicasa, Mx., var. TEXANA, Engelm. (*P. Texana*, Scheele.) Leaves ovate, acuminate, pubescent, with closely appressed, incurved, glandular serratures, 1½–2½ inches long; peduncles 4 lines long; calyx pubescent; drupe globose, small, 6–7 lines in diameter, red. A shrub 1–2½ feet high, growing in patches in prairies. It blooms about April 1st. Fruit ripens about July 1st, but is seldom produced. ("More abundant and larger in Texas. *P. rivularis*, Scheele, is another form of *P. Chicasa* undistinguishable from this." Engelmann.)

Prunus gracilis, Eng. and Gr. *Pl. Lindh.* 1, *p.* 36. With thicker, broader and often obtusish leaves, ¾–1½ inches long and ½–1 inch broad, with spreading mucronate teeth (or nearly so) above, paler, reticulated and downy beneath; drupe globose, 6 lines in diameter; stone thick, rather blunt, with a protuberant, thick and rounded margin. A shrub 1½–2 feet high. Sandy woods and prairies, rare. Very near the north-eastern *P. maritima*.

Gillenia stipulacea, Nutt. Common.

Sanguisorba annua, Nutt. Sulphate flats, where it is erect and simple or sparingly branched; fields, where it is decumbent and much branched.

Rosa setigera, Mx. Common.

Rosa Carolina, L. Arkansas river.

Rosa lucida, Ehrh. (*R. parviflora*, Ehrh.) Dry woods, scarce.

Rosa foliolosa, Nutt. Subterranean stems stoloniferous and widely spreading; erect branches a foot high or less, bearing in the first year a single or sometimes 2 or 3 flowers and generally dying down to the base; large pod depressed-globose, like the

short peduncle usually with a few gland-bearing bristles, its calyx lobes erect or slightly spreading, at last deciduous, bristly glandular, the outer somewhat pinnatifid. Dry open woods and prairies.

Ribes aureum, Pursh. Limestone cliffs.

Saxifraga Virginiensis, Mx. The plant occurring in Atoka county is low (1–3 inches high), the capsule mostly 3-beaked, flowers clustered even in fruit. Wet prairies, common. The normal form occurs on Arkansas river.

Sedum sparsiflorum, Nutt. Sulphate flats, common. Annual.

Gaura sinuata, Nutt. Sulphate flats.

Œnothera rhombipetala, Nutt. Arkansas river.

Œnothera speciosa, Nutt. Rich prairies, whether limestone or not. Rather common.

Œnothera serrulata, Nutt. Prairies, rare.

Œnothera linifolia, Nutt. Sulphate flats.

Mentzelia oligosperma, Nutt. Limestone cliffs.

Mammillaria Nuttallii, Engelm. Dry hills in prairies.

Melothria pendula, L. Fort Smith.

Daucus pusillus. Sulphate flats and dry woods. Common.

Trepocarpus Æthusa, Nutt. Has the strong odor of carrot throughout. Fruit large. Thickets, not uncommon.

Polytænia Nuttallii, DC. Prairies, common.

Peucedanum foeniculaceum, Nutt. Dry ridges. Mostly in limestone where it is common.

Cynosciadum pinnatum, DC. Leaves mostly lanceolate and nearly entire. Large specimens have some of the leaves pinnate. Pools, rather common.

Apium (*Amosclinum*) *Popei*, (Gray). Sulphate flats where it is 1–2 inches high, and thickets where it is 4–6 inches high, common. Umbels oppositifoliate.

Apium (*Leptocaulis*) *patens*, (Gray). Arkansas river.

Apium (*Leptocaulis*) *divaricatus*, (Gray). Blue county.

Chærophyllum procumbens, Lam. Very common.

Osmorrhiza longistylis, DC. Alluvial woods, rare.

Symphoricarpus vulgaris, Mx. Very common.

Galium virgatum, Nutt. Limestone bluffs, uncommon.

Fedia radiata, Mx. Very common.

Fedia longiflora, T. & G. Tube of the corolla rose-purple, the limb white; flowers larger than in any other of our Fedias. Limestone cliffs.

Fedia Nuttallii, T. & G. Flowers also large, but narrower than in *F. longiflora*; bracts variable, entire or red ciliate. Readily distinguished from any other species by a curious spur like appendage on the side of the corolla tube. Springy places and sulphate flats.—[To be continued.]

Fresh Water Algæ.—The question is often asked, Why are there so few who engage in the study of the Fresh Water Algæ? Is it devoid of interest? The Algæ are ranked as a higher order of plants than the Fungi and the Lichens, yet of these there are numerous students; if they find so much to interest, the Algæ ought to claim at least an equal share of attention. Specimens may be collected in almost all localities in common with other forms of Cryptogamic plants, and they are found at all seasons of the year. Early spring brings forth its varieties of livid green Higeocloniams and Mothrines which lived protected under the snow and ice during the vigorous cold of winter; and many varieties of Cacci, without protection maintain their perfect forms and colors; later, as the more genial sun reinvigorates the vegetable kingdom these small but perfect plants are developed everywhere in places supplied with sufficient mois-

ure, with wonderful rapidity. The hot sun of June and July is no hindrance but accelerates the growth; now rivers, ponds and pools are made green with the abundance of many of the more common forms; the sultry weather of August and September is favorable to the development of other varieties on moist or shaded grounds, old wood, walls, trunks of trees, &c. There is no season until the earth is again covered with snow and the rivers are bound up with thick layers of ice, in which the collector is not richly rewarded in his researches. Specimens are easily preserved. When it can be done they ought to be examined when fresh, but dried and laid aside for years, they may be taken up and examined with profit. I was particularly struck with this fact, recently examining a collection made in part, some ten and fifteen years back. The specimens retained their generic and specific characters well.

Is variety, delicacy or beauty an object, they are not excelled by the Fungi or Lichens, nor by their nearer kin the larger marine plants, that attract so much attention from the lovers of the beautiful; true, they are generally very small; the eye needs assistance and generally a good compound microscope, but the admiration and the wonder excited is none the less. A single drop of carefully collected pond water will often be found to contain a score or more of smaller forms, all perfect in symmetry, beautifully shaded with chlorophyl, or variously tinted with orange-yellow, purple or golden red. So small and yet so perfect; the wonders of the Divine mind are no less evident here than in the greater works of His design.

But in studying the life history of these plants the mind is constantly fed with new enjoyments. I cannot forget the first time I observed the "birth of an Œdogonium." I had under the microscope a number of filaments of a plant of this genus; I had been studying the form and character of the oogonias and now was taking the proportions of the length and breadth of the cells, when I saw two cells separating at the joint, and a sack-like form slightly protruding; it was something new to me; I kept my eye on it; it moved very slowly but perceptibly, gradually protruding more and more; soon it was quite out, distorted in form from the pressure it was subjected to in passing through so narrow a passage; in less than five minutes more it changed to a perfect sphere, a head became evident in a somewhat raised colorless point with two cilia on opposite sides of it, these begin to move, the vibration becomes more rapid and communicates motion to the new born thing, it oscillates, and off it darts. In less than fifteen minutes others come to life, and now there are four or five of these "zoospores" darting about in their narrow confines in the field of the microscope. We need not wonder that such men as Ehrenberg and others classified these living spores with the infusoria, they appear to possess volition, how they dart about, but always avoid each other, never collide; the period of their existence is short, in less than half an hour they come to rest, the animal goes back again to the vegetable, they change in form from spherical to oblong, then the heads or ciliated ends gradually put forth prong-like projections, these are the rootlets of a new plant which take hold of any suitable substance near by; the plants elongate by developing cell to cell until we see duplicates of the original mother plant.

The life history of these plants is full of interest and very important for classification, and a large field is here open for investigation.

Have you a desire to make a beginning, where shall you get specimens? Are there near by larger or smaller slow streams, or sheltered angles beside more rapid waters, these are sure to contain something, Spirogyra, Cladophora, Microspora or some other of the common things; or stagnant pools will furnish Œdogonium of some variety, Zygnema, Horniospora, &c., or if you have a pond with Utricularia, or Myriophyllum, gather a quantity, take it hence and wash it by shaking it well in a bucket of clean water, let it settle, pour off the surface until you have a tolerably thick sediment, this will certainly contain some, perhaps very many varieties, of Desmids, beautiful

objects for examination under the microscope; or are there damp, or dripping rocks, gather some of the crusts, or gelatinous coatings, you will find in them Sirosiphon, Scytonema, perhaps Glococapsa, Palmella, or Nostocs and the like. We rarely find one plant alone, generally two or three forms intermingled. The field is so large, the variety so great, the forms so diversified, yet all so perfect in symmetry, the study cannot fail to impress the mind and often excite the utmost enthusiasm. The study has been much neglected, there is much to be worked up. Europe boast of upward of two thousand species. We should find no less; but hitherto we have only seven hundred species recorded. Much remains undone.—FRANCIS WOLLE, *Bethlehem, Pa.*

ERRATUM.—In my list of plants from the Indian Territory contained in the GAZETTE for June, pp. 49, 50, the following errors have been detected. The reader will please correct them:

Delphinium occidentale. This is *D. azureum*, MX., a very canescent variety.

Lepidium integrifolium, should be read *L. intermedium*, Gray. The leaves are entire.

Astragalus recticarpus. This plant is a form of *Indigofera leptosepala*, Nutt. with very narrow leaflets.

Elymus Canadensis, var. *minimus* is *Hordeum pusillum*, Nutt.

Spiranthes Romanzoviana. This plant is now thought to be an undescribed species. More time and material are wanted for its recognition.—A. WOOD.

POLYTRICHUM TENUE MENZIES, LINDB.=*P. Pennsylvanicum*, HEDW.=*Pogonatum brevicaule* BRID.; SULLIV. Icones.

POLYTRICHUM BRACHYPHYLLUM, MICHX.=*Pogonatum brachyphyllum*, BEAUV; SULLIV. Icones.

Probably the male plants of both these species always occur, in their season, in the same localities where the female plants abound. In *P. tenue* the male plants are often mixed, yet they evidently are not developed in the same *nidus*. The male plants are very numerous and conspicuous, apparently acaulescent, but projecting a kind of stem, which is clothed with the confervoid filaments, into the earth, simple or branched. Leaves dark brown or brownish red, numerous and crowded into globular or rosulate heads, spatulate or flabelliform, mucronately acuminate, strongly costate, subdentate or crenate, often subundulate. Antheridia very numerous, paraphysate. (Vide Musc. Appalach, No. 233.) The male plants mature in July and August; the female in September and October. In *P. brachyphyllum* the male and female plants grow together (always?) and apparently are developed in the same *nidus*. The male plants are extremely minute, being invisible to the naked eye, and only visible by the aid of a good lens as mere reddish specks on the surface of the more highly developed prothallus. They are ovate, acaulescent, eradiculose (not being immediately attached to the ground). Leaves few (about 5), red or reddish brown, lax, ecostate, entire obtuse or obtusish, the outer ones roundish, the inner ones (often narrowly) spatulate. Antheridia few (about 4), short and thick (oblong-cylindrical), eparaphysate. The male plants mature in early spring (in the Southern States) the female in late autumn (in New Jersey).—C. F. AUSTIN.

DARLINGTONIA CALIFORNICA, TORR.—In September, 1874, while observing the habits of Darlingtonia, I found a great many small white larvæ in the liquid and insect mass at the bottom of the tubes. They were found in all the tubes, even those of the seedling leaves contained from one to three, while in the larger leaves they numbered hundreds. I tried, in vain, to find out what insect produced the larvæ and to note any change in them. They are always present winter and summer, and even active even when the thermometer marks zero. They make their appearance in the young leaves

soon after they begin to secrete the clear liquid in the tubes before the orifice of the hoods are open, and no trace of any insects in the liquid for them to feed on. If flies, or small bits of fresh meat be placed in the tubes having closed hoods, the larvæ will immediately begin feeding on them, and if the pieces are no larger than grains of wheat nothing will remain after forty-eight hours.

In February, 1875, I made an examination of the larvæ when the thermometer was a little below zero, and the liquid in the tubes was frozen down to the insect mass. I found them numerous and active. I selected four tubes of average size and took them home for the purpose of numbering the larvæ. In the first was 59; second 82; third 168, and fourth 206.—R. M. AUSTIN, *Crescent Mills, California.*

LETTER FROM DR. LOUIS WATSON, ELLIS, KANSAS.—We are permitted to place the following interesting letter before our readers through the courtesy of Mr. Sereno Watson:

"The principal matter I wished to mention to you in relation to Botany, is the great inequality of the abundance of certain plants upon these plains, in different years. In 1872 or 3, *Malvastrum coccineum* was very abundant, so much so in comparison with previous years, as to be remarked upon by some of the residents as a new plant here. This was a mistake of course, for every year since it has been common, but not so abundant. In 1874 *Anemone Caroliniana* covered acres of ground, large patches being *purple* in color (or blue as I called it), and other large patches *white*. I met with one small patch of 25 or 30 plants which were *pink*. In '75 and '76 they were only common, and in '77, rare or very few. In '74 also *Allium (reticulatum?)* was abundant in patches of a few square rods, conspicuous as red or pinkish patches. Also similar but less abundant patches of a white flowered *Allium*. During the subsequent years, though common, very much less abundant. The same year there were large patches of a yellow flowered cruciferous plant, (I forget what), in bloom after the Anemones. I have seen no similar patches since, except *Nasturtium sinuatum* in damp pond-like places. In 1876 *Grindelia squarosa* covered the whole country, but in '77 I did not see 100 specimens. *Euphorbia marginata* was rather rare, and most abundant where the sod had been disturbed, or the land broken, yet in 1876, some of the distant hills were whitened by its abundance. In 1877 only as usual. Where the sod is turned, for fire-guards for instance, no matter in what out of the way region on the divides, these three plants invariably appear, viz: *Euphorbia marginata*, *Solanum rostratum* and *Martynia proboscidea*. In the year following the grasshoppers, an annual, soon perishing grass, was very abundant and was called a new grass to the country. There has been little of it since. I never met with *Pyropappus grandiflorus* until in 1877, and then only two specimens, until I found quite a number (75 or so) at the edge of the village on an acre or so of light soil which had been plowed only in 1871. It is my impression that out here I have not seen *Argemone Mexicana* except on disturbed ground, always the white variety.

What is the origin of the "fairy rings" so frequent on the plains? Sometimes they are simply more or less perfect *circles* of greener grass, of a width of from 6 inches to a foot and of a diameter from 2 or 3 feet to 12 or 14 feet. I have seen some of which the principal vegetation was *Lepidium Virginicum*, but as a general thing they are only fresher looking "buffalo grass" of the plains. Rarely there are fungi, as an imperfect row of puff balls at the outer edge of the belt."

FERNS OF TRINIDAD.—Mr. Augustus Fendler, who began his botanical work as a collector thirty years ago, when he first explored the region of Santa Fe, New Mexico, and made an admirable and well known collection, and who afterwards made still larger collections in Venezuela, is now resident in the Island of Trinidad. He proposes to collect all the species of Ferns and fern-like plants of that rich tropical island,

and to distribute them in sets. The first installmeut, containing complete and handsome specimens of 78 species, is just received in excellent condition. The price is $7.50 per set. Application may be made to the Curator of Harvard University Herbarium, Cambridge, Mass. The species will speedily be named by Professor Eaton, of Yale College, and a printed list furnished.—A. G.

Mr. Fendler's Trinidad Ferns are very fine specimens, carefully collected, and preserved with uncommon success. They are, perhaps without exception, in fruit; and illustrate admirably the general character of the Ferns of Tropical America. The only criticism that can be offered is that many of them are so large and fine that they cannot be brought within the dimensions of ordinary herbarium paper without some clipping, a thing which a lover of Ferns does not like to do. The sets contain several species of Tree-ferns, examples of *Polybotrya*, *Aneimia*, *Oleandra*, *Danæa*, and other tropical genera, and a good series of West-Indian *Adianta*. I am preparing a list of their names, and it will be ready for publication pretty soon.—D. C. EATON.

NOTES FROM THE BLUE RIDGE, VA.—Just before reaching the summit of the Blue Ridge, "Fancy Gap Pass," the roadsides, for one or two miles, were lined with *Rhododendron* and *Kalmia*, the latter in full bloom, as magnificent a display as I have ever met. Near this point a small stream crosses the road and spreads itself over a marshy flat. In the marsh, we again found *Boykinia*, *Calopogon* and *Drosera*, also *Azalea viscosa* in full bloom. At the summit we found *Pyralaria* and *Clethra acuminata* in every direction. In the rivulets *Boykinia* and also *Trautvetteria palmata* and *Veratrum viride*, *Saxifraga erosa*, *Parnassia Caroliniana ?*, *Magnolia acuminata*, *M. Fraseri* and *M. Umbrella*, *Viola rotundifolia*, *Listera convallarioides*, Hook., *Microstylis monophyllos*, Lindl., *Amianthium muscætoxicum*, Gr., *Osmunda regalis*, *O. cinnamomea*, *Dicksonia punctilobula*. The above list may seem small, but our time was limited and our object to secure specimens of several plants. There are some others, not yet satisfactorily placed, of which you will be informed if they prove of interest.

On June 27th we left the confluence of Little and Big Reed Island. No change in the flora seemed striking, until we neared Jenning's Store, a few miles this side of Hillsville. Here, in a branch, we espied, for the first time, one of the plants we were in search of, *Boykinia aconitifolia*. Pursuing the search, we found *Calopogon pulchellus* and *Drosera rotundifolia* in the marshy grounds. Just beyond Jenning's Store a rivulet crosses the road. Here again we found *Boykinia* in abundance; also *Euonymus Americanus*, *Gillenia trifoliata* marked by more copious foliage and more distinctly colored stems than our Wythe Co., plant, *Helianthemum Canadense* and *Chrysogonum Virginicum* were found on the road sides.—HOWARD SHRIVER, *Wytheville, Va.*

FERNS OF KENTUCKY, BY JOHN WILLIAMSON.—This book is one of the most timely publications we have received, for it is both convenient and cheap. It contains sixty full-page etchings and six wood cuts, drawn by the author. When we state that in addition to these it contains full descriptions, blank pages for notes, and articles on the structure, cultivation, fertilization, collecting and drying, and classification of ferns, it will be acknowledged by all to be a marvel of cheapness. The etchings are very superior, the subjects being beautifully handled and true to nature. An advanced notice of this work appeared in the GAZETTE for June, p. 54, written by Mr. Davenport, and such hearty words of commendation from so high an authority should be sufficient to recommend it to every botanist. Although entitled the "Ferns of Kentucky," it is al most a complete hand-book for the neighboring States, and with but few additions would suffice for all the States west of the mountains and east of the Mississippi. We hope the book will meet with ready sale and we can cordially recommend it to the readers of the GAZETTE. For price and address see advertisement on the second page of the cover.

Owing to the fact that both the Editors are absent on a Botanical trip the next number of the GAZETTE will be delayed two weeks.